

## **IN THE CLAIMS**

**Please amend the claims as follows:**

1. (currently amended) A method in a data processing system including an automated software test environment for automatically testing a software application, said method comprising the steps of:

establishing a work flow manager for automatically managing said automated software test environment, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

establishing a plurality of ordered test phases to be executed in a specified order including at least an initialization test phase for preparing said test environment for testing said software application, said initialization test phase capable of being executed prior to an availability of said software application;

transmitting an event to said work flow manager utilizing one of said plurality of computer systems to start execution of selected ones of said plurality of ordered test phases; and

controlling execution of said selected ones of said plurality of ordered test phases utilizing said work flow manager in response to a receipt of events.

2. (original) The method according to claim 1, further comprising the step of executing an initialization test phase utilizing said work flow manager in response to a receipt of a build event by said server computer system, said build event being generated by one of said plurality of computer systems utilized to build said software application.

3. (original) The method according to claim 1, further comprising the steps of:

said step of establishing a plurality of ordered test phases further comprising the step of establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application; and

executing a first plurality of said plurality of tests in series.

4. (original) The method according to claim 1, further comprising the steps of:

said step of establishing a plurality of ordered test phases further comprising the step of establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application; and

executing a second plurality of said plurality of tests in parallel.

5. (original) The method according to claim 1, further comprising the steps of:

said step of establishing a plurality of ordered test phases further comprising the step of establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application;

executing a first plurality of said plurality of tests in series; and

executing said first plurality of said plurality of tests in parallel with a fourth plurality of said plurality of tests.

6. (original) The method according to claim 1, further comprising the step of receiving a job description utilizing said work flow manager, said job description including an identification of said software application and an identification of a plurality of tests to be executed on said software application.

7. (canceled)

8. (original) The method according to claim 1, wherein the step of establishing a plurality of ordered test phases further comprises the step of establishing an installation test phase for installing test processes and said software application on said plurality of computer systems.

9. (original) The method according to claim 1, wherein the step of establishing a plurality of ordered test phases further comprises the steps of:

establishing an execution test phase for executing a plurality of tests on said software application; and

establishing a termination test phase for terminating said execution of said tests.

10. (original) The method according to claim 1, further comprising the step of specifying an order for executing said plurality of ordered test phases including specifying completing execution of an initialization test phase prior to executing an installation test phase, completing execution of said installation test phase prior to executing an execution test phase, and completing execution of said execution test phase prior to executing a termination test phase.

11. (currently amended) The method according to claim [[7]] 1, further comprising the step of during said initialization test phase prior to said software application being available, preparing said automated test environment to execute said plurality of tests.

12. (currently amended) The method according to claim [[7]] 1, further comprising the step of generating an initialization event in response to a completion of building said software

13. (currently amended) The method according to claim [[7]] 1, wherein said step of prior to said availability of said software application, preparing said automated test environment to execute said plurality of tests further comprises the step of determining an availability of one of said plurality of computer system to be utilized to execute one of said plurality of tests.

14. (currently amended) The method according to claim [[7]] 1, wherein said step of establishing an initialization test phase further comprises the step of establishing an initialization test phase including the steps of:

executing initialization test phase processes;

building said software application; and

copying said built software application to one of said plurality of computer systems, wherein said software application is available when said built software application is copied to one of said plurality of computer systems.

15. (original) The method according to claim 14, further comprising the step of generating an installation event in response to a completion of said copying said built software application to one of said plurality of computer systems and a completion of initialization test phase processes.

16. (original) The method according to claim 8, wherein said step of establishing an installation test phase further comprises the step of establishing an installation test phase including the step of installing a plurality of test cases on one of said plurality of computer systems.

17. (original) The method according to claim 8, wherein said step of establishing an installation test phase further comprises the step of installing an operating system required to execute one of said plurality of tests on one of said plurality of computer systems.

18. (original) The method according to claim 8, wherein said step of establishing an installation test phase further comprises the step of installing a plurality of test tools required to execute one of said plurality of tests on one of said plurality of computer systems.

19. (original) The method according to claim 9, wherein said step of establishing an execution test phase further comprises the step of establishing an execution test phase including the step of executing said plurality of tests.

20. (original) The method according to claim 9, wherein said step of establishing a termination test phase further comprises the step of establishing a termination test phase including the step of resetting said automated test environment to an original state.

21. (original) The method according to claim 1, further comprising the step of establishing a validation procedure including the steps of:

suspending execution of said plurality of tests prior to a completion of said plurality of tests; and

providing a notification of said suspension.

22. (original) The method according to claim 1, further comprising the step of establishing a validation procedure including the steps of:

terminating execution of said plurality of tests prior to a completion of said plurality of tests; and

providing a notification of said termination.

23. (original) The method according to claim 1, further comprising the step of establishing a validation procedure including the steps of:

executing a process to determine a result of an execution of each said plurality of tests;  
and

reporting said result.

24. (original) The method according to claim 1, wherein said step of establishing a plurality of ordered test phases further comprises the step of establishing a plurality of ordered test phases, at least each of two of said plurality of order test phases being executed utilizing different ones of said plurality of computer systems.

Claims 25-30 (canceled).

31. (original) A method in a data processing system including an automated software test environment for automatically testing a software application, said method comprising the steps of:

establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

in response to a completion of one of said plurality of tests, executing a validation procedure to validate a result of said one of said plurality of tests;

suspending execution of others of said plurality of tests being executed in response to a failure of said validation procedure to validate said result of said one of said plurality of tests; and

providing a notification of said suspension of execution.

32. (original) A method in a data processing system including an automated software test environment for automatically testing a software application, said method comprising the steps of:

establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

in response to a completion of one of said plurality of tests, executing a validation procedure to validate a result of said one of said plurality of tests;

terminating execution of others of said plurality of tests being executed in response to a failure of said validation procedure to validate said result of said one of said plurality of tests; and

providing a notification of said termination of execution.

33. (original) A method in a data processing system including an automated software test environment for automatically testing a software application, said method comprising the steps of:

establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

in response to a completion of one of said plurality of tests, executing a validation procedure to validate a result of said one of said plurality of tests;

spawning a new process in response to said execution of a validation procedure to determine a result of execution of said one of said plurality of tests; and

reporting a result of said spawned new process, wherein said result of execution of said one of said plurality of tests is reported.

34. (currently amended) A data processing system including an automated software test environment for automatically testing a software application, said data processing system comprising:

means for establishing a work flow manager for automatically managing said automated software test environment, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

means for establishing a plurality of ordered test phases to be executed in a specified order including at least an initialization test phase for preparing said test environment for testing



said software application, said initialization test phase capable of being executed prior to an availability of said software application;

means for transmitting an event to said work flow manager utilizing one of said plurality of computer systems to start execution of selected ones of said plurality of ordered test phases; and

means for controlling execution of said selected ones of said plurality of ordered test phases utilizing said work flow manager in response to a receipt of events.

35. (original) The system according to claim 34, further comprising means for executing an initialization test phase utilizing said work flow manager in response to a receipt of a build event by said server computer system, said build event being generated by one of said plurality of computer systems utilized to build said software application.

36. (original) The system according to claim 34, further comprising:

said means for establishing a plurality of ordered test phases further comprising means for establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application; and

means for executing a first plurality of said plurality of tests in series.

37. (original) The system according to claim 34, further comprising:

said means for establishing a plurality of ordered test phases further comprising means for establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application; and

means for executing a second plurality of said plurality of tests in parallel.

38. (original) The system according to claim 34, further comprising:

said means for establishing a plurality of ordered test phases further comprising means for establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application;

means for executing a first plurality of said plurality of tests in series; and

means for executing said first plurality of said plurality of tests in parallel with a fourth plurality of said plurality of tests.

39. (original) The system according to claim 34, further comprising means for receiving a job description utilizing said work flow manager, said job description including an identification of said software application and an identification of a plurality of tests to be executed on said software application.

40. (canceled).

41. (original) The system according to claim 34, wherein said means for establishing a plurality of ordered test phases further comprises means for establishing an installation test phase for installing test processes and said software application on said plurality of computer systems.

42. (original) The system according to claim 34, wherein said means for establishing a plurality of ordered test phases further comprises:

means for establishing an execution test phase for executing a plurality of tests on said software application; and

means for establishing a termination test phase for terminating said execution of said tests.

43. (original) The system according to claim 34, further comprising means for specifying an order for executing said plurality of ordered test phases including specifying completing

execution of an initialization test phase prior to executing an installation test phase, completing execution of said installation test phase prior to executing an execution test phase, and completing execution of said execution test phase prior to executing a termination test phase.

44. (currently amended) The system according to claim ~~[[40]]~~ 34, further comprising means during said initialization test phase prior to said software application being available, for preparing said automated test environment to execute said plurality of tests.

45. (currently amended) The system according to claim ~~[[40]]~~ 34, further comprising means for generating an initialization event in response to a completion of building said software application.

46. (currently amended) The system according to claim ~~[[40]]~~ 34, wherein said means prior to said availability of said software application, for preparing said automated test environment to execute said plurality of tests further comprises means for determining an availability of one of said plurality of computer system to be utilized to execute one of said plurality of tests.

47. (original) The system according to claim 40, wherein said means for establishing an initialization test phase further comprises means for establishing an initialization test phase including:

means for executing initialization test phase processes;

means for building said software application; and

means for copying said built software application to one of said plurality of computer systems, wherein said software application is available when said built software application is copied to one of said plurality of computer systems.

48. (original) The system according to claim 47, further comprising means for generating an installation event in response to a completion of said copying said built software application to one of said plurality of computer systems and a completion of initialization test phase processes.

49. (original) The system according to claim 41, wherein said means for establishing an installation test phase further comprises means for establishing an installation test phase including means for installing a plurality of test cases on one of said plurality of computer systems.

50. (original) The system according to claim 41, wherein said means for establishing an installation test phase further comprises means for installing an operating system required to execute one of said plurality of tests on one of said plurality of computer systems.

51. (original) The system according to claim 41, wherein said means for establishing an installation test phase further comprises means for installing a plurality of test tools required to execute one of said plurality of tests on one of said plurality of computer systems.

52. (original) The system according to claim 42, wherein said means for establishing an execution test phase further comprises means for establishing an execution test phase including means for executing said plurality of tests.

53. (original) The system according to claim 42, wherein said means for establishing a termination test phase further comprises means for establishing a termination test phase including means for resetting said automated test environment to an original state.

54. (original) The system according to claim 34, further comprising means for establishing a validation procedure including:

means for suspending execution of said plurality of tests prior to a completion of said plurality of tests; and

means for providing a notification of said suspension.

55. (original) The system according to claim 34, further comprising means for establishing a validation procedure including:

means for terminating execution of said plurality of tests prior to a completion of said plurality of tests; and

means for providing a notification of said termination.

56. (original) The system according to claim 34, further comprising means for establishing a validation procedure including:

means for executing a process to determine a result of an execution of each said plurality of tests; and

means for reporting said result.

57. (original) The system according to claim 34, wherein said means for establishing a plurality of ordered test phases further comprises means for establishing a plurality of ordered test phases, at least each of two of said plurality of order test phases being executed utilizing different ones of said plurality of computer systems.

Claims 58-63 (canceled).

64. (original) A data processing system including an automated software test environment for automatically testing a software application, comprising:

means for establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server

computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

means for executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

means responsive to a completion of one of said plurality of tests, for executing a validation procedure to validate a result of said one of said plurality of tests;

means for suspending execution of others of said plurality of tests being executed in response to a failure of said validation procedure to validate said result of said one of said plurality of tests; and

means for providing a notification of said suspension of execution.

65. (original) A data processing system including an automated software test environment for automatically testing a software application, comprising:

means for establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

means for executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

means responsive to a completion of one of said plurality of tests, for executing a validation procedure to validate a result of said one of said plurality of tests;

means for terminating execution of others of said plurality of tests being executed in response to a failure of said validation procedure to validate said result of said one of said plurality of tests; and

means for providing a notification of said termination of execution.

66. (original) A data processing system including an automated software test environment for automatically testing a software application, comprising:

means for establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

means for executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

means responsive to a completion of one of said plurality of tests, for executing a validation procedure to validate a result of said one of said plurality of tests;

means for spawning a new process in response to said execution of a validation procedure to determine a result of execution of said one of said plurality of tests; and

means for reporting a result of said spawned new process, wherein said result of execution of said one of said plurality of tests is reported.

67. (currently amended) A computer program product including an automated software test environment for automatically testing a software application, said computer program product comprising:

instruction means for establishing a work flow manager for automatically managing said automated software test environment, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

instruction means for establishing a plurality of ordered test phases to be executed in a specified order including at least an initialization test phase for preparing said test environment for testing said software application, said initialization test phase capable of being executed prior to an availability of said software application;

instruction means for transmitting an event to said work flow manager utilizing one of said plurality of computer systems to start execution of selected ones of said plurality of ordered test phases; and

instruction means for controlling execution of said selected ones of said plurality of ordered test phases utilizing said work flow manager in response to a receipt of events.

68. (original) The computer program product according to claim 67, further comprising instruction means for executing an initialization test phase utilizing said work flow manager in response to a receipt of a build event by said server computer system, said build event being generated by one of said plurality of computer systems utilized to build said software application.

69. (original) The computer program product according to claim 67, further comprising:

said instruction means for establishing a plurality of ordered test phases further comprising instruction means for establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application; and

instruction means for executing a first plurality of said plurality of tests in series.



70. (original) The computer program product according to claim 67, further comprising:

said instruction means for establishing a plurality of ordered test phases further comprising instruction means for establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application; and

instruction means for executing a second plurality of said plurality of tests in parallel.

71. (original) The computer program product according to claim 67, further comprising:

said instruction means for establishing a plurality of ordered test phases further comprising instruction means for establishing a plurality of ordered test phases including an execution test phase for executing a plurality of tests on said software application;

instruction means for executing a first plurality of said plurality of tests in series; and

instruction means for executing said first plurality of said plurality of tests in parallel with a fourth plurality of said plurality of tests.

72. (original) The computer program product according to claim 67, further comprising instruction means for receiving a job description utilizing said work flow manager, said job description including an identification of said software application and an identification of a plurality of tests to be executed on said software application.

73. (canceled)

74. (original) The computer program product according to claim 67, wherein said instruction means for establishing a plurality of ordered test phases further comprises instruction means for establishing an installation test phase for installing test processes and said software application on said plurality of computer systems.

75. (original) The computer program product according to claim 67, wherein said instruction means for establishing a plurality of ordered test phases further comprises:

instruction means for establishing an execution test phase for executing a plurality of tests on said software application; and

instruction means for establishing a termination test phase for terminating said execution of said tests.

76. (original) The computer program product according to claim 67, further comprising instruction means for specifying an order for executing said plurality of ordered test phases including specifying completing execution of an initialization test phase prior to executing an installation test phase, completing execution of said installation test phase prior to executing an execution test phase, and completing execution of said execution test phase prior to executing a termination test phase.

77. (currently amended) The computer program product according to claim ~~[[73]]~~ 67, further comprising instruction means during said initialization test phase prior to said software application being available, for preparing said automated test environment to execute said plurality of tests.

78. (currently amended) The computer program product according to claim ~~[[73]]~~ 67, further comprising instruction means for generating an initialization event in response to a completion of building said software application.

79. (currently amended) The computer program product according to claim ~~[[73]]~~ 67, wherein said instruction means prior to said availability of said software application, for preparing said automated test environment to execute said plurality of tests further comprises instruction means for determining an availability of one of said plurality of computer system to be utilized to execute one of said plurality of tests.

80. (currently amended) The computer program product according to claim ~~[[73]]~~ 67, wherein said instruction means for establishing an initialization test phase further comprises instruction means for establishing an initialization test phase including:

instruction means for executing initialization test phase processes;

instruction means for building said software application; and

instruction means for copying said built software application to one of said plurality of computer systems, wherein said software application is available when said built software application is copied to one of said plurality of computer systems.

81. (original) The computer program product according to claim 80, further comprising instruction means for generating an installation event in response to a completion of said copying said built software application to one of said plurality of computer systems and a completion of initialization test phase processes.

82. (original) The computer program product according to claim 74, wherein said instruction means for establishing an installation test phase further comprises instruction means for establishing an installation test phase including instruction means for installing a plurality of test cases on one of said plurality of computer systems.

83. (original) The computer program product according to claim 74, wherein said instruction means for establishing an installation test phase further comprises instruction means for installing an operating system required to execute one of said plurality of tests on one of said plurality of computer systems.

84. (original) The computer program product according to claim 74, wherein said instruction means for establishing an installation test phase further comprises instruction means for installing a plurality of test tools required to execute one of said plurality of tests on one of said plurality of computer systems.

85. (original) The computer program product according to claim 75, wherein said instruction means for establishing an execution test phase further comprises instruction means for establishing an execution test phase including instruction means for executing said plurality of tests.

86. (original) The computer program product according to claim 75, wherein said instruction means for establishing a termination test phase further comprises instruction means for establishing a termination test phase including instruction means for resetting said automated test environment to an original state.

87. (original) The computer program product according to claim 67, further comprising instruction means for establishing a validation procedure including:

instruction means for suspending execution of said plurality of tests prior to a completion of said plurality of tests; and

instruction means for providing a notification of said suspension.

88. (original) The computer program product according to claim 67, further comprising instruction means for establishing a validation procedure including:

instruction means for terminating execution of said plurality of tests prior to a completion of said plurality of tests; and

instruction means for providing a notification of said termination.

89. (original) The computer program product according to claim 67, further comprising instruction means for establishing a validation procedure including:

instruction means for executing a process to determine a result of an execution of each said plurality of tests; and

instruction means for reporting said result.

90. (original) The computer program product according to claim 67, wherein said instruction means for establishing a plurality of ordered test phases further comprises instruction means for establishing a plurality of ordered test phases, at least each of two of said plurality of order test phases being executed utilizing different ones of said plurality of computer systems.

Claims 90-96 (canceled).

97. (original) A computer program product including an automated software test environment for automatically testing a software application, comprising:

instruction means for establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

instruction means for executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

instruction means responsive to a completion of one of said plurality of tests, for executing a validation procedure to validate a result of said one of said plurality of tests;

instruction means for suspending execution of others of said plurality of tests being executed in response to a failure of said validation procedure to validate said result of said one of said plurality of tests; and

instruction means for providing a notification of said suspension of execution.

98. (original) A computer program product including an automated software test environment for automatically testing a software application, comprising:

instruction means for establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

instruction means for executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

instruction means responsive to a completion of one of said plurality of tests, for executing a validation procedure to validate a result of said one of said plurality of tests;

instruction means for terminating execution of others of said plurality of tests being executed in response to a failure of said validation procedure to validate said result of said one of said plurality of tests; and

instruction means for providing a notification of said termination of execution.

99. (original) A computer program product including an automated software test environment for automatically testing a software application, comprising:

instruction means for establishing an event-driven work flow manager for automatically managing said automated software test environment in response to a receipt of events, said automated software test environment including a plurality of computer systems coupled to a server computer system utilizing a network, said work flow manager being executed utilizing said server computer system;

instruction means for executing a plurality of tests on said software application utilizing said plurality of computer systems being managed by said work flow manager;

instruction means responsive to a completion of one of said plurality of tests, for executing a validation procedure to validate a result of said one of said plurality of tests;

instruction means for spawning a new process in response to said execution of a validation procedure to determine a result of execution of said one of said plurality of tests; and

instruction means for reporting a result of said spawned new process, wherein said result of execution of said one of said plurality of tests is reported.